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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,815	12/11/2003	Heike Quellhorst	H 5316 US	2795

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EXAMINER
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MCKANE, ELIZABETH L

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/734,815

Applicant(s)

QUELLHORST ET AL.

Examiner

Leigh McKane

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 041904.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. Claims 1-6, 9-11, 13, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al (U.S. Patent No. 6,146,473) in view of Ahmed et al (U.S. Patent No. 5,239,002).

Shibata et al teaches a process for the nickel- and chromium-free treatment of untreated metal surfaces wherein the surfaces are contacted with an acid degreaser (col.7, lines 18-19) followed by contact with a composition including an acrylic resin comprising copolymers of N-heterocyclic monomers, wherein the acrylic resin is added in an amount of 0.01-10 g/l (col.3, lines 57-60). The monomers include N-vinyl caprolactam, N-vinylpyrrolidine, vinyl pyridine, and N-vinyl imidazole. See col.4, lines 1-6. The composition further includes at least one heavy metal, such as zirconium (Zr), which can be added in the form of a complex fluoride or phosphate. The complex fluoride or phosphate of the heavy metal is added in the amount of 0.01-10 g/l (col.5, lines 6-15). Additionally, the composition of Shibata et al may include a phosphoric acid or phosphate in an amount of 0.01-20 g/l. See col.5, lines 21-29. The pH of the composition is approximately 2.0-5.0 (col.5, lines 65-66). While Shibata et al discloses the use of N-heterocyclic copolymers as the acrylic resin, the use of vinylpyrrolidone specifically is not taught.

Ahmed et al, however, evidences the known use of nitrogen-containing copolymers of heterocyclic compounds in metal surface treatment compositions. Among the heterocyclic compounds enumerated by Ahmed et al are monomers such as N-vinylpyrrolidone, vinylcaprolactam, N-vinylimidazole, and N-vinylpyridine. See col.2, lines 20-52. As Ahmed et al equates vinylcaprolactam, vinylpyridine, and vinylimidazole (all employed by Shibata et al) with N-vinylpyrrolidone (col.2, lines 46-52), it is deemed obvious to one of ordinary skill in the

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art to use N-vinylpyrrolidone as one of the N-heterocyclic monomers used in the copolymer of Shibata et al.

5. Claims 7, 8, 12, 14, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al and Ahmed et al as applied to claim 1 above, and further in view of Steinbrecher et al (WO 96/27034).

With respect to claims 7, 8, and 14, although Shibata et al teaches the use of complex fluorides of the heavy metals in amounts of 0.01-10 g/l, Shibata et al fails to disclose specifically fluoric acids of the heavy metals. Steinbrecher et al teaches a similar method of metal surface treatment wherein the heavy metals are added to the composition in the form of fluorometallic acids and anions thereof. The fluorometallic acids include  $H_2ZrF_6$  (col.8, lines 5-6). As Steinbrecher et al discloses that the fluorometallic acids are functional equivalents of the anion form, it would have been obvious to substitute a fluorometallic acid for the heavy metal-fluoride complex of Shibata et al.

As to claims 12, 17, and 18, Shibata et al is silent with respect to treating a metal surface having an anticorrosive layer thereon. Steinbrecher et al, however, discloses treating a metal surface which has a phosphate conversion coating thereon with a composition containing a fluorometallic acid and a vinylphenol polymer. As Steinbrecher et al evidences that it was known in the art at the time of the invention to further treat phosphated metal surfaces, it would have been obvious to apply the method of Shibata et al to phosphated surfaces, as well as, bare metal surfaces.

### ***Double Patenting***

6. Claims 1-4, 7, 8, and 10-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 12, 26-28, 31, 32, 35, and 36 of copending Application No. 10/203,150. Although the conflicting claims are not identical, they are not patentably distinct from each other.

The upper limit of the concentration of the vinylpyrrolidone polymer in the instant application is 49.9 mg/l (0.0499 g/l) which is only 0.001 g/l lower than the concentration claimed (0.05 g/l) by the copending application. It is not deemed patentable to increase the concentration by one-thousandth gram per liter, as one would not have expected the properties of the composition to be altered by such a small change in concentration. The concentration of fluorometallic acid claimed by the instant application is encompassed by the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.


### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh McKane whose telephone number is 571-272-1275. The examiner can normally be reached on Monday-Wednesday (6:30 am-4:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on 571-272-1142. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**Leigh McKane**  
**Primary Examiner**  
**Art Unit 1744**

elm  
30 March 2005